

# Ham RADIO News

Newsletter of the Amateur Radio Society of India (Indian Affiliate of IARU)  
Jan 2014 Issue

## President's message



Welcoming a new year and welcoming new approaches to promote amateur radio- that is what all of us will have to do.

Amateur radio has many activities competing with it for the time available for prospective licensees. There are so many chat programmes which people use to communicate and it is often difficult for us die-hard radio amateurs to convince new comers that this is not just another "chat" programme.

Different people have come into amateur radio for different reasons but for those who have taken the plunge it is something unique and not comparable to anything else.

Radio amateurs become technically competent as they experiment with different technologies in the hobby. These technical skills are very much in demand by companies seeking new recruits.

In many places amateur radio has become part of the curriculum and students get credit by additional marks for taking the subject- this is something that each one of us should try and do in your own areas so the word is spread more widely.

Stress on the importance of amateur radio which provides vital communications during emergencies.

- ✓ Radio amateurs are at the forefront of emergency communications worldwide

- ✓ Radio amateurs are trained to work under adverse conditions using simple temporary stations

- ✓ Amateur radios can work using any 12 volt DC source
- ✓ Deploying a station is quick, e.g. Dipole wire antenna, ARSI has developed a Grab Kit speed up setup of emergency stations
- ✓ Radio amateurs constantly train themselves
  - ✓ Field day
  - ✓ Contests
  - ✓ Dxpeditons

The several activities that radio amateurs can enjoy are something that no other hobby offers and we need to spread the message.

I recently participated in two training programmes- one in Manila conducted by the Asia-Pacific Telecommunity F (APT) and another in Hanoi conducted by the International Telecommunications Union (ITU) where different modes of tackling emergency communications were demonstrated and I showcased amateur radio as one of the most effective ones.

73, Gopal Madhavan VU2GMN

## From the Editor's Desk



HAPPY NEW YEAR to all! 2013 was an eventful year – DXpeditions, Contests etc. Unfortunately the band conditions have been poor due to very low solar activity even though we are right now at the peak of cycle 24.

More and more amateurs are bitten by the “contest bug” which is a very good trend; and the article in this issue “Radio Contesting” by Andre DL4UNY is quite appropriate and timely. We hear more VU stations participating in contests.

A DXpedition to Lakshadweep, signing VU7AG off Agatti island between Nov.20 and December 10 last year was very successful. It was voted as the FIFTH most popular DXpedition of 2013. More details are included in this issue.

Hopefully the band conditions improve and we will see a lot more activity in the coming years,

73, Ganesh VU2TS

## IARU Chooses Anniversary Day Theme

Each year 18 April is World Amateur Radio Day, which celebrates the founding of the International Amateur Radio Union (IARU) in 1925.

The theme 'Amateur Radio: Your Gateway to Wireless Communications' has been chosen for the day in 2014.

In 100 years it has evolved from crude spark-gap technology to digital signal processing and software-defined radios.

The IARU understands that the date is close to Easter. It encourages activity earlier or later to gain as much exposure and publicity as possible for modern and easily accessed amateur radio.

For that reason, the Wireless Institute of Australia has chosen April the 13 to the 15th to celebrate World Amateur Radio Day this year - by holding its PR4AmateurRadioExpo.

Remember the Expo is not a competition, but an opportunity for everyone whether at a public display or on the air, to show amateur radio to the public.

## 60 Meter band open for Canadian operators

Canada has granted Amateur Radio operators there the use of five 60 meter channels on a non-interference basis. The center-channel frequencies harmonize with those available to U.S radio amateurs on 60 meters: 5332 kHz, 5348 kHz, 5358.5 kHz, 5373 kHz, and 5405 kHz.

"Given that use of these frequencies was requested, in part, to allow for cross-border communications in times of emergency," Industry Canada said, "harmonization of the frequencies with the United States would facilitate such communications between the Canadian and the US Amateur Radio communities."

Amateur stations will be restricted to USB, data, RTTY and CW modes, with a maximum bandwidth of 2.8 kHz, and a maximum power output of 100 W ERP - the same the US allows.

"Canadian amateur operations shall not cause interference to fixed and mobile operations in Canada or in other countries," Industry Canada ruled, "and, if such interference occurs, the Amateur Service may be required to cease operations. The Amateur Service in Canada may not claim protection from interference by the fixed and mobile operations of other countries."

## Cuban Hams can use 60m band

Faithful to their promise of a new universal 60m ham band in the last WRC, the Ministry of Communications of Cuba approved this January the access of Cuban hams to this new band.

The law approved on January 20 of 2014, from the Ministry of Communications of Cuba allows the use of the spectrum between the 5418 to 5430 KHz, a continuous segment of 12 KHz, this unlike other countries that are allowing just channels.

The assignation is as a secondary users as per ITU recommendations for region 2, with the emphasis on its use in emergencies nets, as Cuba is in the path of the Caribbean Hurricanes every year and this band allows a steady communication path for all the island.

The new law sets this band for everyday use, but once an official emergency is declared by the Cuban State, then the use of the band will be restricted to emergency traffic exclusively, ceasing all others kinds of use on it.

The new assignation allows SSB, CW and Digital, the former limited to PSK31 and PSK63. All ham categories of the three existent in Cuba can access the band based on a power limitations of 10W for the novices and 50W for the rest; with a note of the relaxation of this power limitation up to 100W tops for all users in emergency conditions as needed for a reliable link establishment.

The access of the hams to this band is not immediate, the process involves the request and approval for individual hams to the related Authority and the modification of the ham's licence (an in-office process of about 1 day), so the band will populate steadily, but slowly.

Most Cubans hams use commercial radios with full or partial coverage

Contd.

of HF bands or even homebrew radios, so the "hardware" will not be a major problem, for a significant percent of Cuban hams will be a matter of setting up an antenna for this new band or simply tune in his multi-band antenna. Pavel Milanes Costa CO7WT

## RADIO ACTIVITY IN GOA

Its heartening to see a spurt of activity from Goa! Here is a report from Manish-VU2MTQ: Following special event stations are currently QRV from VU

1. AU5SV active until 31-Jan-2014 QSL via VU2SMN [Operating Special Call AU5SV for the period from 09/01/2014 to 31/01/2014, to the mark 151st Birth anniversary of Swami Vivekananda.]

2. AT2LG14 active until 30-Jan-2014 QSL via VU2SMS - activating special call-sign AT2LG14 for the Lusofonia games, and this station will be active between 15/01/2014 & 30/01/2014.

QSL Manager: QSL direct with sufficient postage (Note IRCs are not accepted by Indian post).

Members of GOA RADIO AMATEURS SOCIETY (GRAS) , VU2SMS- (Manju), VU2DM (Didi) , VU2ROE (Rony) , VU2CY (Cyril), SWL Animesh, SWL YL Kanchan, are actively participating in the event.  
73 es Namasthe  
de  
Manju VU2SMS

FYI: The Lusophony is a multinational multi-sport event organized by the ACOLOP, which involves athletes coming from Lusophone (Portuguese-speaking) countries, namely those belonging to the CPLP (Community of Portuguese Language Countries), but also others where there are significant Portuguese communities or that have a common past with Portugal. Associacao dos comites olimpicos de lingua official portuguesa ACOLOP

Sri – VU2SBJ reports from Mangalore:

Dear friends,

We had a very nice informal eyeball last evening at Mangalore with super seniors VU2CT and VU2HEG. At 92 years, VU2CT-Daya is the oldest VU Ham. He is so very active and young, he looks only 70 something, Hi. We were fortunate to have him with us during his visit to Mangalore.

VU3BGS Prabhu welcomed him and VU2HEG Hegde felicitated him with a memento and shawl.

VU3FEN Sukumar welcomed the other super senior VU2HEG - At 77, Hegdeji is omnipresent on VHF, HF, and in everyone's thoughts and heart. VU2CT Daya felicitated Hegde and awarded him with the "24x7 VHF Lifeline Award" for being the most committed and ever active operator on VHF in the region. Without VU2HEG VHF activity in our region would not be as exciting.



VU3FDT Mahesh coordinated the event, while VU3FDU Ashwin handled the logistics. VU2RDQ was the official photographer.

We missed our local friends who could not make it due to short notice. Some photos are posted on the net; here is the link:

[https://picasaweb.google.com/114964447949530990697/VU2CT\\_VU2HEG19Oct2013?authuser=0&authkey=Gv1sRgCMmjrrvo1fz94AE&feat=directlink](https://picasaweb.google.com/114964447949530990697/VU2CT_VU2HEG19Oct2013?authuser=0&authkey=Gv1sRgCMmjrrvo1fz94AE&feat=directlink)

Wishing VU2CT & VU2HEG all the very best! ,  
73 de Sri / VU2SBJ



Jayu VU2JAU reports from Gwalior:

SIR J.C.BOSE and SEMINAR on Communication in Scindia Kanya Vidyalaya

Amateur Radio club Gwalior celebrated Sir J.C.Bose birth anniversary by conducting a seminar on HAM Radio in Scindia Kanya Vidyalaya, one of the most prominent schools in Gwalior on 21 November 2013. It was the occasion of Young Round Square Conference celebrated in SKV Gwalior where 84 students from 14 well known schools of India took part along with students of SKV.



The Principal of the school Mrs. Nishi Mishra and teachers of the school took special interest to conduct the event. More than 200 students took part in the program. The Program consisted of a Power point presentation on Disaster communication, a small movie on HAM Radio and live demonstration.

The presentation on HAM Radio was given by Jayu S. Bhide, VU2JAU. It was very interactive which created interest among students and guests who asked many questions which were answered by Jayu S. Bhide VU2JAU and assisted by Aniket Ashtikar VU2LOL. A Live demonstration on communication was arranged at 3 different places where more than 25 students assembled with Aniket Ashtikar VU2LOL, and talked to their friends with Jayu Bhide VU2JAU on VHF.

The other station was at a distance of 1 km. operated by Kailash Agrawal ex VU4KC who actively took part in the live demo.

OM Amit Agrawal SWL and Aditya Ashtikar SWL also assisted in the program. The program started at 5.00 p.m. and went on till

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## HAM RADIO seminar in Rustamji Institute of Technology, Tekanpur

Rustamji Institute of Technology, an institute under the control of Border Security Force Academy, Tekanpur is situated about 30 kms. from Gwalior on the way to Jhansi. Amateur Radio club Gwalior conducted a seminar on HAM Radio for B.E. Electronics students along with the faculties on 4th December 2013. Principal Commandant Mr. Tyagi, who has a deep knowledge in Signals, himself took interest and was present at the seminar. Jayu S. Bhide VU2JAU with Kailash Agrawal ex VU4KC and Aditya Ashtikar SWL supported to organize the program.

It was a great experience for the students who had never heard of HAM Radio. More than 100 students who took part in the event were surprised to know the activities done by Amateurs. The seminar started with a brief talk on HAM Radio by Jayu VU2JAU followed by a power point presentation which explained about HAM Radio activity in India, examination pattern, who can join and the importance of HAM Radio in disasters. Some more video clippings were shown to give an

idea about HAM Radio effectiveness in disasters when nothing works. A Morse code competition against the text messaging was also shown to prove that CW is still faster and effective.

After the session students asked many questions which were answered by Jayu VU2JAU. Later on souvenirs were distributed among the students and faculty and World Amateur Radio map was given to the Principal Commandant Mr. Tyagi. Professors Mr. Pathak and Mrs Shah were impressed with the seminar and asked to conduct a workshop on antenna in the month of January 2014.

73's de Jayu S. Bhide VU2JAU



## JAMBOREE ON THE AIR 2013

Several amateurs set up temporary stations in schools all over the country during the JOTA 2013 in the second weekend of October 2013. We have reports from Chennai and Gwalior.

Chennai JOTA station at Besant Arundale Higher Secondary School, in Kalakshetra Foundation Campus was set up and operated by Chennai Hams. Thanks to VU3RGK, VU3USI, VU3UKT, and VU3ASB who took turns manning the station.

Thanks also to VU2YNT, VU3PMY, VU2PLL, VU2ATM, and other JOTA stations for interacting with the Scouts, Guides, Cubs and Bulbuls who enthusiastically came to participate. The backbone of the event were VU3CDV, Sharath- the scout pack leader, Ms Chamundeswari- Art Teacher cum Scouts and Guides Incharge from the host school, and her enthusiastic and energetic Headmistress.

73 de Aravind-VU2ABS

VU2LOL was set up at Gwalior Glory High School between 19<sup>th</sup> & 20<sup>th</sup> October 2013

as the Jamboree-on-the-air station. Several scouts, guides, cubs and bulbuls participated and exchanged greetings with other stations around the country.

73 de Jayu VU2JAU

## Can we enhance the Ionosphere?

I have always been wondering how the HF bands are buzzing with activity on a contest day even through days of very poor band conditions due to low solar activity? I have discussed this with several old-timers, and mentioned this in an earlier newsletter too.

The question was: "Can a bunch of hams enhance the ionosphere by transmitting at the same time"? Carl / K9LA sent me the following note which is informative.

From: Carl Luetzelschwab <[carlluetzelschwab@gmail.com](mailto:carlluetzelschwab@gmail.com)>  
Date: Sat, Oct 26, 2013 at 7:08 AM

Ganesh,

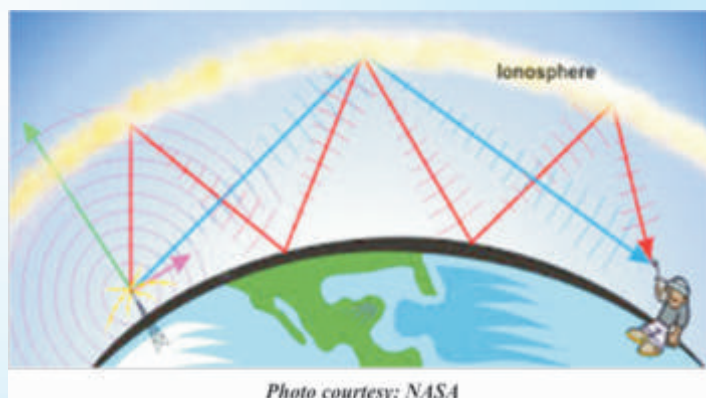
Recently a QST reader asked the same question. My response to him was that the power density needed to modify the E region is around 1 milliwatt per square meter (from Radio Techniques for Probing the Terrestrial Ionosphere, Hunsucker, 1991). That translates to a huge ERP (effective radiated power). For example, the HF ionospheric modification facility (commonly called an ionospheric heater) at Tromso, Norway has an ERP of about 360 megawatts. Their transmitter puts out 1.4 megawatts and the gain

of their antenna is 24 dBi, which results in about 3 milliwatts per square meter at 100 km.

Now let's assume there are 1,000 contesters on the same band, each running 1 kilowatt into a 10 dBi antenna. Let's further assume they are all beaming to the same spot in the E region that's about 400 km down the road (in other words, they're all within an 800km diameter). And let's even further assume that all of these signals are on at the same instant of time and arrive at that spot in-phase. That works out to 0.08 milliwatts per square meter - which is still an order of magnitude less than needed.

Thus I have a problem with the theory that many, many transmitted signals can enhance the ionosphere. I believe the bands are simply open more than we think, and a massive amount of activity (as in a contest) shows this. Note that 10-Meters was really good for several days before the contest - when the amount of people on was considerably less.

Carl K9LA







#### Lightning Strikes – VU2RCT

Friends,

On Sunday 02-11-2013, Mangalore city saw one of the worst natural calamities caused by severe lightning strikes.

While the whole city was in a joyful Deepavali festival mood, the terror struck at around 08:45 PM. Although no loss of human life has been reported, thousands of people lost their valuable house-hold items.

Having been located in an elevated area, I was not spared. Air conditioner, Power Inverter, Home theater System, DTH system, Broad band modem, Half a dozen ceiling fans, CFLs - the list of items that have gone QRT is long.

Fortunately, both HF and VHF antennas were disconnected, so most of the equipment including the radios were saved. The 30 A SMPS although disconnected from the wall socket had gone QRT !!.

*I was in the QTH with other members of my family. The sound was deafening and the experience was horrifying. With a scientifically designed well-made Lightning Arrestor that has been put up in a most appropriate location, a much larger devastation was averted. No antennas were physically present above the arrestor level !!!!*

*So... When you put up high raised antennas, be sure that you provide adequate protection against lightning !!.*

*This mail is only to share my experience fighting the natural calamity.*

*73's de VU2RCT\_Chandra at Mangalore.*

*[Image above is not the lightning over Mangalore – Ed.]*

## WHAT IS LIGHTNING?

[A brief note on lightning, from the Ed..]

Lightning is one of the most beautiful displays in nature. It is also one of the most deadly natural phenomena known to man. With bolt temperatures hotter than the surface of the sun and shockwaves beaming out in all directions, lightning is a lesson in physical science and humility.

There are nearly five million lightning flashes occurring on our planet each day originating from inside thunderclouds, yet despite decades of research we still don't understand what exactly is happening inside the clouds to start the lightning bolt.

[In order to get a conventional spark, the electric field needs to surpass the breakdown field, i.e., the point at which air loses its insulating properties and becomes capable of conducting electricity. For air, this is about 50,000 volts per inch at sea level. (On B.R.Hills it is probably 40,000- HI) An internal combustion engine accomplishes this by supplying a high voltage—say 20,000 volts—across the narrow gap of the spark plug. Thunderstorms can also generate big voltages. They do this when ice and water particles carried by updrafts collide with soft hail carried downward by gravity.]

A cloud-to-ground lightning strike starts as a channel of negative charges makes its path towards the ground. This occurrence is known as a stepped leader. The stepped leader continues towards the ground in a series of steps that are each about 50 to 100 meters in length. This stepped leader can branch out in many directions. (A huge jumlumtree was split in half by a bolt one night here on the hills a few years ago)

In response to the discharge of negative charges coming from the cloud base, currents of positive charges start moving upward from the ground, usually along elevated objects; these are called streamers or upward leaders.

When the stepped leader and the upward leader meet, usually between 30 to 100 meters above the ground, the negative charges begin to flow downward. Almost instantaneously, a much larger and luminous electric current shoots up to the cloud, following the path taken by the stepped leader. This is known as the return stroke, and it is also what we see in the sky that is known as lightning. This whole process occurs so quickly (in less than one second!) that the lightning appears to travel from the cloud to the ground, when in fact, the opposite is true.

A lightning strike or a lightning flash, is usually made up of more than one stroke of lightning. After the initial powerful stroke, subsequent weaker strokes can follow which usually follow the same path of the initial stroke. When the lightning follows the same path, you'll notice that it appears to flicker. Sometimes it takes a different path, and it can appear to dance. On average, there are usually three to four subsequent strokes but the number can be as high as over twenty.

Cloud-to-ground lightning is the most dangerous and damaging form of lightning. Despite this, lightning within a cloud or that goes from cloud-to-cloud is the most common type of lightning. This type of lightning looks like a bright flicker in a cloud. For every cloud-to-ground strike, there can be three to five cloud-to-cloud strikes.

Another type of lightning occurs when some strokes actually emit from the ground into the sky. In this case, the stepped leader proceeds from the ground towards the cloud.

The vast majority of lightning strikes are negative lightning strikes, meaning there is a net transfer of negative charges from the cloud to the ground. Negatives strikes make up about 95 per cent of lightning strikes.

When there is a net transfer of positive energy from the cloud to the ground, the strikes are considered positive lightning strikes. These strikes originate from areas of the cloud that have areas of high positive charge, such as at the top of the cloud, or upper parts of the thunderstorm.

Even though only about five per cent of lightning strikes are positive, they are quite significant because they carry a higher charge and last longer than negative strikes. Due to this, they tend to cause more damage to power and electricity infrastructure, and also start more forest fires than negative strikes. Positive strikes are more common in severe thunderstorms and in thunderstorms that occur during the winter. And then there are some myths:

### Lightning Myth #1

The tallest objects in a storm don't always get struck by lightning. It's true that taller objects are closer to the clouds, but as discussed previously, lightning can strike the ground at a close distance to a tall object. Taller objects may have a higher possibility of a strike, but where lightning is concerned, the strike path is not always predictable.

### Lightning Myth #2

Surge protectors won't save your electronics (TV, VCR, PC etc) if lightning strikes your power line. Surge protectors provide protection for power surges in the line from the electricity board, but not for lightning. To really guard against lightning strike damage, you need a lightning arrester. The arrester uses a gas-filled gap that acts as an open circuit to low potentials, but becomes ionized and conducts at very high potentials. If the lightning hits the line you are protecting, the gas gap will conduct the current safely to ground.



Pollachi Udumalai hams met on 11.01.14

Vu2s: CMN, DX, HF, VCR, ANT, GDA, WDP, VU3s: CMI, CMX, HRA, NJX, PKJ, MOB, and SWL Balraj attended. Tnx: VU2DX



A FOX HUNT was organized by Bangalore Amateur Radio Club on the 13<sup>th</sup> December 2013; a report in the HINDU newspaper is reproduced below:

The HINDU Dec 13, 2013 08:00 PM

A fox hunt on radio

City Hams will go on a fox hunt

This weekend will have enthusiastic Hams in Bangalore go on a "fox hunt". It's a sport where amateur radio operators of the city will participate in a contest where they use radio-direction finding techniques to locate radio transmitters hidden in a designated search area, the fox hole. The 14th VHF Bangalore Day Foxhunt is being conducted by the Bangalore Amateur Radio Club tomorrow, December 15. The club is the oldest amateur radio club in India!

Amateur radio operators or Hams are a community of people who use wireless communication to communicate with other Hams in any part of the globe. It's a hobby and completely non-commercial. Hams are famous for helping out in times of natural calamities. The fox hole this Sunday will be located within an

aerial distance of 35 kms from Vidhana Soudha.

"We have about 80 people registered for tomorrow's fox hunt," says Ramesh Kumar K.G. (VU2LU), secretary of the Club. There are participants from Tamil Nadu and Kerala as well. During the two-hour hunt, every five minutes a signal is transmitted for one minute; the final destination must be found by tracing these signals. Mobile phones are not allowed.

India is home to 20,000 Hams, and Bangalore alone has 1,800 Hams, points out Kumar. Such events help popularise the technical hobby.

The flag-off is at 8 a.m, at Bharat Scouts & Guides HQ, opposite KIMS Hospital. Non-competing participants who wish to join for lunch and fellowship can pay a fee of Rs. 250 at the time and point of flag-off. Children below five are exempt from fee. The event will be rounded off with a fellowship lunch.

For details check [www.barc.in](http://www.barc.in)

## Radio Contesting – another facet of our versatile hobby! [by Andre - DL4UNY]



Andre DL4UNY at the shack of VU2TS

Switch on your radio on a weekend and you will experience it: the bands are crowded, operating-style is fast, and the exchange between the stations in QSO is very short and, for an outsider, something weird and difficult to understand.

During my trips through all India I met lots of active radio amateurs but their operating style is so different from what I'm used to from Europe and North America. This article intends to show you yet another way to enjoy our hobby.

For specific contests the rules are slightly different, of course. But all contests have one thing in common: making a large number of QSOs - working as many stations as possible within the stipulated time frame. Depending on the rules the stations could be 'from anywhere' or, as it is in your ARSI-Contest, DXers have to work as many Indian stations as possible. Each station keeps recording the Contest-QSOs in a logbook. Nowadays this is, of course, mostly assisted by a computer program. At the end of the contest the operator sends the log extract to the organizer of the contest. The classic contest-bands are 160/80/40/20/15/10m, WARC are excluded.

Why should you participate in such an event?

Because it is fun. As lots of technical competitions,

contest-results show who has the best equipment and who is able to handle this equipment well. Of course you can buy a radio, an antenna and an amplifier and take part in any contest. This is good for the first step, to bring your signal in the air. Trust me, after participating in the contest you will know much more about our hobby. You will find out the best time to work a specific place on earth on a specific band. You will get to know your radio, you will feel more secure with the operating style and, if you work in CW, get used to higher speeds. Even if you are not so fast in Morse code, you don't understand the fast-spoken English of the big-gun-stations or you are just too shy to make your first contest QSOs: don't hesitate, call them! We all are people, we all were beginners once upon a time. Don't worry, the experienced operators will listen for low-speed CW stations.

### Getting ready for a contest - Selecting a contest

For a successful start check out any contest calendar (for example WA7BNM) for a contest you want to participate in. For the beginning, DON'T go for a small regional one. Go for a big one like CQ-WW, WPX, WAE, All Asian Contest, ARRL or IARU World Championship. In these contests it's possible to make many many QSOs in a very short time and so your learning-curve will go up very fast.

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## Equipment

Of course you can use any 'out of the box'-equipment. A simple HF-Transceiver, an antenna and, important due to low signal levels, head phones. A nice gimmick is a CAT-interface (computer assisted transceiver) for the connection between Computer and Radio. If you decide for a CW-contest then don't try to send by hand. Use a simple computer interface and send by keyboard.

Now you will wonder why so many people have so much fun on talking to other people with commercial gear. Well, nobody has real fun on that. Using standard-equipment is accepted for newcomers, but a real radio amateur understands electronics and electro-magnetism. Trust me, it is much more fun to reach another continent with an antenna made with your own hands, or with a CW-signal generated by a home-made interface. The next thing you need is a contesting-software.



Andre fixing a 3-el Yagi at 20m

There are many free softwares available. Well-known is N1MM and the best, according to me - and the opinion of many other contesters - is DX-Log by 9A5K. The latter is a copy of the classic CT (K1EA) and Wintest. Of course, available for free. What you need to do next is to connect your radio to the computer. On a modern Transceiver like FT-x000 or K3 no interface is needed, just a simple 1:1 cable to the COM-Port of your computer. If you don't have a spare serial port on your computer, you need an additional USB-Serial-Adapter such as the AtenUC232A (Don't waste money on Chinese no-name products, many of them will not work for our purposes, Hi).

For other radio-types one needs to assemble a homebrew CAT-interface. In most cases this can be done with two transistors, some resistors and maybe one or two diodes. For detailed information check out the internet or send an e-Mail to me. It's easy to make, don't buy a ready-made interface. Home-brewing is an important step to understand the matter, and to be better than others. Same applies for the CW-interface. Take your soldering-iron, 3 or 4 components, some elbow-grease and people will hear you with error-free great-sounding CW.

Now it's important to select the correct contest on the program of your choice. For the first time you may choose any contest and play around with the software. Click on any cluster-spot in your logging program and, as if a ghost is next to you, your transceiver will jump to the station's frequency. After this is done and you are sure enough how to send and enter a report with your logging-software, YOU ARE READY FOR THE EVENT.

## The Contest

Of course the contests I mentioned above are 48hr-contest. Starting Saturday morning at 00:00:00 UTC and ending Sunday evening 23:59:59 UTC. Be nice to yourself and your family and don't go for a 48hr-participation. The first times should be 'just for fun'. Spend some time on the radio listening, pick out a station, listen if you understand the station clearly and make sure it really is the station announced in the cluster. Now it's your time. Send your call once. Listen. The other station will repeat your call sign, give you a report (mostly 5nn (CW) or 59 (phone)) and the contest-specific exchange (e.g. the operators age in All Asian Contest). Now it's your turn. Don't repeat the other station's call sign, just give a report and the exchange. That's it! You just made your first contest QSO. All in about 10 seconds!

## After the Contest

All you need to do now is to send your log to the organizer. For this you need to export your logged QSO into the CABRILLO format, which can be done with the export-function of the log-software. Now it's important to name the file <CALLSIGN>.LOG and just send it as attachment to the organizer.

For your personal usage you can export the contest-log as ADIF-file and import it in your own logbook. You will see that the number of worked countries will increase in due course!

## Only Operating?

Being a contester doesn't mean that you will spend the rest of your life under headphones. Contesting is much more than operating. During your participation you will realize that something is not working the way it should or maybe you get an idea how to improve some things. Of course, buying new things will not help you much. What you can buy in a shop is what everybody else can buy, too.

Contd.



Homebrewing is the keyword for a better understanding and for better results and, last but not least, for more fun on the radio! Is there anything better than working a Caribbean prefix with a homemade antenna, maybe connected with a homemade amplifier?

As always, you can develop further. This is not the end. After a successful contest-season you may want to connect you rotator to your computer/logging software as well, to tune the antenna in the right position when clicking on a cluster spot. Or you may want to start with a two-radio-setup (SO2R – Single Operator two Radios). For that, band pass-filters are necessary, antenna switches, so-called SO2R-boxes... the variety is limited by your own imagination!

I've been travelling a lot through India. Your country is full of skilled radio amateurs. Don't be shy of short-wave, show people that you are there, show that you are able to do it! And don't forget: it's a hobby and it's a load of fun. I wish you all good luck and pleasure while discovering the world beyond vhf-repeaters and 40m-nets.

73 and Happy New Year 2014  
Andre DL4UNY [www.dl4uny.de](http://www.dl4uny.de)

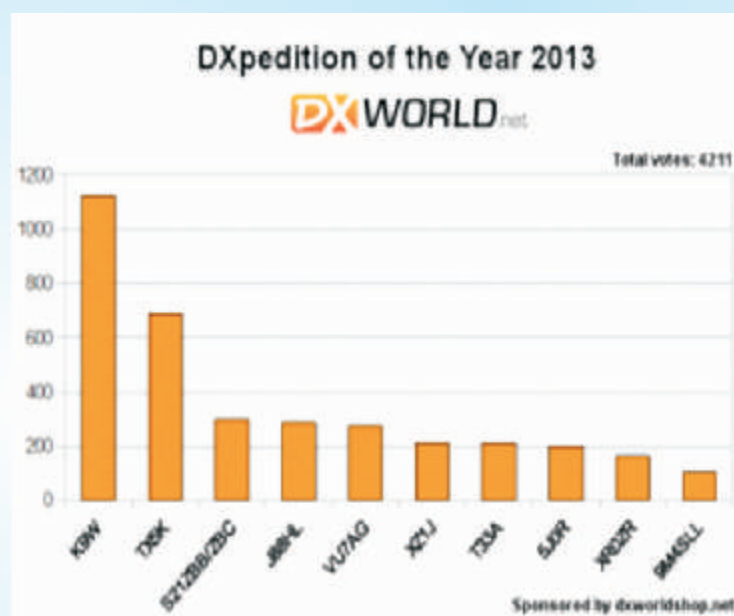
#### LAKSHADWEEP DXPEDITION 2013 – VU7AG 10.87°N 72.20°E Grid: Mk60cu

The team led by Kris VU2VKU consisted of Pai-VU2PAI, Nandu-VU2NKS, Chetan-VU2DMP, Deepak-VU2CDP, Chandra-VU2RCT, Basappa-VU2NXM, Aravind-VU2ABS and his XYL Raji-VU3CHM. Mainland support was ably handled by Prasad-VU2PTT.

Total number of QSOs logged: a whopping 55,325 - which includes 520 CW QSOs on the top band.

VU7AG was voted the 5th most popular DXpedition in 2013. A great reward. It was an honour to be in the running with some first-class efforts to places like Wake Is. (K9W), Clipperton Is. (TX5K), Myanmar (XZ1J), Banaba Is. (T33A), Bangladesh (S21ZBB) to name a few.

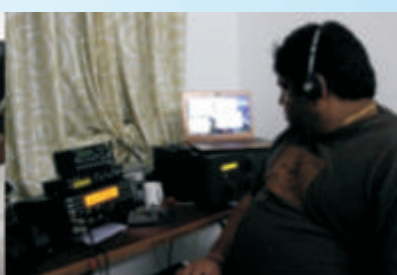
Congratulations to the team!



The team



VU2NXM



VU2PAI



VU3CHM



VU2ABS [Now you see him..]



VU2CDP

## "Listen Before Transmit" software

It can be annoying when someone transmits over the top of an existing contact, now Steve N2CKH has developed software that may make this a thing of the past. Listen Before Transmit (LBT) involves software automatically checking the entire passband before transmitting to ensure the channel is clear of any SSB, CW or Digital signals. If any signals are present the transmission can be inhibited and the operator informed.

The software Steve N2CKH has developed appears to be very effective, in his testing, it has so far successfully detected all human generated signals in the passband that can be heard by ear or seen in a waterfall display.

Andy K3UK writes: "Here is a quick video demonstrating my attempts to transmit on top of an already occupied frequency, with ALE software preventing it. In the video, I place a couple of calls to K2MO. You will see the failed connect attempt listed. Thus, a successful LBT use."

<http://www.youtube.com/watch?v=zC--OD2i6wo>

[Txn: Southgate ARC newsletter]

Sometimes there may be a QSO in progress on a certain frequency and I may not hear one of the stations due to poor skip; I'd normally think that the frequency is clear and start operating on that frequency. A good practice is to transmit "Is this frequency in use?" a couple of times, however to make sure all's well... -Ed.

## New Antarctic base to go on-the-air

Lee, DS4NMJ, and a scientific team were expected to leave on January 25th, for the new Jang Bogo Korean research station currently under construction at Terra Nova Bay, Northern Victoria Land, Antarctica.

The base will be in the Ross Dependency and near the Italian Zucchelli Station and is scheduled to open February 12th. The team, aboard the ice breaker Araon, is planning to be at Jang Bogo by early February.

Look for activity by Lee as D8A sometime in mid-February. Lee says that he will be at Jang Bogo until January 31st, 2015.

Activity will be on 160-10 meters using mostly CW with some SSB and RTTY as well.

QSL via HL2FDW

Tnx: OPDX

## DXHeat - DXer's tool

DXHeat offers versatile filtering of incoming Real-time Web DX-Cluster DX Spots. With its built in push algorithms, it displays DX spots in an instant while being optimized for low band-width at the same time.

Rich graphical tools and HTML5 Audio & WebSDR Technology make it indispensable for serious DXers. It also has over 25 million DX spots listed/searchable in its database.

DXHeat also provides a visual tool to check the current band activity into all continents at a glance and a WebSDR to listen to any spot listed on your browser (No additional software or plugins needed). OPDX editor's note: This site seems to work better in Google Chrome and an older version of JAVA.

See details on the Web Page <http://www.dxheat.com/>

Tnx: OPDX news

## New propagation predictions for first quarter 2014

Steve GØKYA has now updated his HF propagation prediction charts for the first quarter of 2014 to take into account the latest predicted smoothed sunspot numbers.

It is generally thought that we may now be at or past the second hump of this sunspot maximum, but the sun continues to throw some surprises.

For example, the observed sunspot numbers for the last six months of 2013 were 57.0, 66.0, 36.9, 85.6, 77.6 and 90.3, which shows the great variation.

The current predicted smoothed sunspot number (which is that recommended for VOACAP-based programs) is about 61-62 for the next three months.

This equates to a 10.7cm solar flux index of about 110 (on 24th January it was 136 with an actual sunspot number of 121).

A flux over 100 suggests that 10m will continue to open on a fairly regular basis and the next few months should throw up some good opportunities for DX on the higher bands. However, the longer-term trend may be downwards.

On the downward side of the cycle we may also experience more unsettled geomagnetic conditions due to flares and coronal mass ejections. These may cause short-term D-layer absorption (especially on routes over the poles) or depletion of the F layer (with corresponding poor conditions on the upper HF bands). Looking on the bright side it may also give rise to aurorae.

The short-path HF predictions from the UK can be found via a link at the top right on Steve's blog page at <http://g0kya.blogspot.co.uk/>.

If you want to produce more detailed point-to-point calculations he recommends VOACAP online at <http://www.voacap.com/prediction.html>

## uLog - Simple Ham Radio Logger

A new, free logging application uLog, written by Chelmsford radio amateur Charlie M0PZT, offers a fast and no-fuss way to log contacts.

uLog has been designed as an easy-to-use logbook application that offers just the basic fields for QSO entry.

There are no fancy gimmicks, just quick and easy input of QSOs whether you're in the Shack or somewhere /P with the laptop.

uLog was unveiled at the recent CARS Amateur Radio Skills Workshop.

Its 'flexi-input' was of particular interest, as you can type the QSO details into a single box, and the software intelligently works out in which fields to put the information.

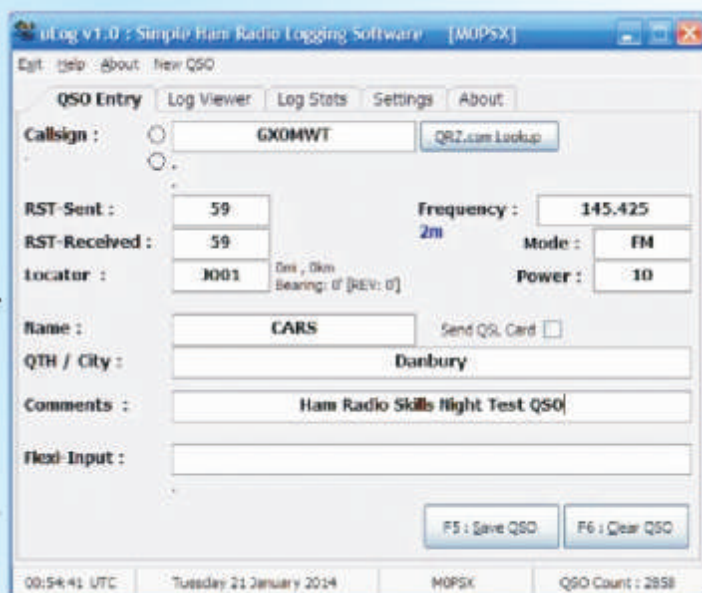
Find out more about uLog and download a copy at <http://www.m0pzt.com/?uLog>

DXCC is issued by the American Radio Relay League for proven contact with at least 100 entities on a list. Most of these entities are countries, with a few additions that are regarded as separate, mostly for geographic reasons.

More than two thirds of two meter DXCC holders are in Europe, with their concentration of almost 70 countries in close proximity. North America features about a fifth of applicants, with about a tenth in Japan. ZL3TY was the first in Oceania and the southern hemisphere, with ZS6OB being first in Africa. South America has yet to produce its first winner.

Jan used digital modes with a four-Yagi station. He has been working on his DXCC for a decade. His single-band award brings the number of bands on which South Africans have earned DXCC to eleven. Jan reports that several South Africans are working on repeating the feat on the 430 MHz band, but all are still a long way off. Only three stations have conquered this band, with all of them being in Europe.

Tnx: SARL



### VHF DX

So you think VHF/2 meters is only for "Local" contacts? Guess again!

Jan Pienaar ZS6OB applied for the DXCC award using only contacts made in the two meter band. Jan becomes the first amateur in Africa and the second in the southern hemisphere to